Mathematics

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Board – ICSE	Class –VIII	Topic – Understanding Shapes

1. Calculate the sum of all the interior angles of a polygon having sides n=6 & n=20
2. Find the number of sides of a polygon, the sum of whose interior angles is 540° & 1980°
3. Is it possible to have a polygon whose sum of interior angles is 840°?
4. Is it possible to have a polygon, the sum of whose interior angles is 7 right angles?
5. Find the measure of each angle of a regular polygon having sides n=15 & n=24?
6. Find the number of sides of a regular polygon each of whose exterior angles are 30° and 40°?
7. Find the number of sides of a regular polygon, if its interior angle is equal to exterior angle.
8. The sum of the interior angles of a regular polygon is equal to six times the sum of exterior angles. Find the number of sides of the polygon.
9. One angle of an Octagon is100°. And all the other seven angles are equal. What is the measure of each one of the equal angles?
10. Each interior angle of a regular polygon is 144. Find the interior angle of a polygon, which has double the number of sides as the first polygon.

Answer

1. 720° & 3240°
2. $n = 5$ & $n = 13$
3. Not possible.
4. Not possible.
5. N=15 : interior angles=156° and Exterior angles=24°
   N=24: interior angles=165° and Exterior angles=15°
6. For 30° sides=12 and For 40° $sides = 9$
7. No of sides=4
8. No of sides of polygon=14
9. Each angle is equal to 140°
10. Interior of second polygon=162°